

REMARKS

The Office Action rejects claim 36 under 35 U.S.C. § 112, second paragraph. Additionally, the Office Action rejects claims 19-23 and 28-33 under 35 U.S.C. § 102(b) as being anticipated by Hollmann (U.S. Patent No. 4,283,241). The Office Action also rejects claims 19-23, 26-33, 35 and 36 under 35 U.S.C. § 102(b) as being anticipated by Okada et al. (Published U.S. Patent Application No. 2001/0002608). Additionally, the Office Action rejects claims 24, 25, and 34 under 35 U.S.C. § 103(a) as being unpatentable over Hollmann or Okada in view of Caretta et al. (Published U.S. Patent Application No. 2001/0042586).

By this Reply, Applicant has amended claim 19 to recite "wherein application of the tread band is carried out before picking up the belt structure from the auxiliary drum; wherein during disposing the belt structure on the auxiliary drum, the auxiliary drum is arranged in a coaxial-alignment relationship with the primary drum and interacts with devices for application of the belt structure; wherein after disposing the belt structure and before winding up said at least one continuous strip element of elastomer material, a step of moving the auxiliary drum away from a vertical plane containing the rotation axis of the primary drum towards a delivery member feeding the strip like element is carried out, starting from said coaxial-alignment relationship with the primary drum; and further comprising the step of moving the auxiliary drum away from said delivery member to position the auxiliary drum again in the axial-alignment relationship with respect to the primary drum, once application of the tread band has been completed." This amendment is fully supported by the specification-as-filed, including the claims and Figures. For example, support for the claim language "wherein the auxiliary drum is

arranged in coaxial-alignment relationship with the primary drum” can be found at least on page 11, lines 6-8 of the specification-as-filed; support for the claim language “wherein application of the tread band is carried out before picking up the belt structure from the auxiliary drum” can be found at least in previous claim 20; support for the claim language “wherein after disposing the belt structure and before winding up said at least one continuous strip element of elastomer material, a step of moving the auxiliary drum away from a vertical plane containing the rotation axis of the primary drum towards a deliver member feeding the strip like element is carried out, starting from said coaxial-alignment relationship with the primary drum” can be found at least in previous claim 27, on page 14, lines 8-13, and in Fig. 1 of the application-as-filed; and support for the claim language “further comprising the step of moving the auxiliary drum away from said delivery member to position the auxiliary drum again in the axial-alignment relationship with respect to the primary drum, once application of the tread band has been completed” can be found at least in previous claim 26, on page 14, lines 8-13, and in Figs. 1 and 2 of the application-as-filed.

Additionally, Applicant has amended claim 30 to recite “devices for application of belt layers on the auxiliary drum to form a belt structure; at least one unit for applying a tread band onto the belt structure . . . wherein the auxiliary drum is arranged in coaxial-alignment relationship with the primary drum . . . ; an actuating assembly set to drive the auxiliary drum in rotation around a geometric axis thereof so that said strip-like element is circumferentially distributed on the belt structure, and to cause controlled relative displacements between the auxiliary drum and said at least one delivery member for distribution of said strip-like element so as to form said coils disposed in mutual side by

side relationship to define the tread band; and wherein said actuating assembly is arranged to cause translation of the auxiliary drum away from a vertical plan containing the rotation axis of the primary drum towards said at least one delivery member, starting from a position at which the auxiliary drum interacts with the devices for applying the belt layers, and to move the auxiliary drum away from said delivery member to position it again in axial alignment relationship with respect to the primary drum.” This amendment is fully supported by the specification-as-filed, including the claims and Figures. For example, support for the claim language “devices for application of belt layers on the auxiliary drum to form a belt structure” and “wherein the auxiliary drum is arranged in coaxial-alignment relationship with the primary drum” can be found at least in original claim 36 and on page 11, lines 6-8 of the application-as-filed; support for the claim language “an actuating assembly set to drive the auxiliary drum in rotation around a geometric axis thereof so that said strip-like element is circumferentially distributed on the belt structure, and to cause controlled relative displacements between the auxiliary drum and said at least one delivery member for distribution of said strip-like element so as to form said coils disposed in mutual side by side relationship to define the tread band” can be found at least in original claim 32; and support for the claim language “wherein said actuating assembly is arranged to cause translation of the auxiliary drum away from a vertical plane containing the rotation axis of the primary drum towards said at least one delivery member, starting from a position at which the auxiliary drum interacts with the devices for applying the belt layers, and to move the auxiliary drum away from said delivery member to position it again in axial-alignment relationship with

respect to the primary drum” can be found at least in original claim 36 and on page 14, lines 8-13 of the application-as-filed.

Applicant has cancelled claims 20, 26, 27, 32, and 36. The originally filed application fully supports the amendments to the claims. No new matter has been added. Claims 19, 21-25, 28-31, and 33-35 are currently pending.

Regarding the rejection of claim 36 under 35 U.S.C. § 112, second paragraph, claim 36 has been cancelled.

Regarding the rejections of claims 19, 21-23, 28-31, and 33 under 35 U.S.C. § 102(b) as being anticipated by Hollmann, Applicant respectfully submits that Hollmann cannot anticipate these claims. In order to anticipate a claim, a reference must teach every limitation of the claim. M.P.E.P. § 2131. A method according to any of claims 19, 21-23, 28, and 29 includes, *inter alia*, “disposing a carcass structure on a primary drum,” “disposing a belt structure on an auxiliary drum,” “picking up the belt structure from the auxiliary drum to transfer the belt structure to a position coaxially centered with respect to the carcass structure,” and “a step of moving the auxiliary drum away from a vertical plane containing the rotation axis of the primary drum towards a delivery member feeding the strip like element is carried out, starting from said coaxial-alignment relationship with the primary drum” (emphasis added). Similarly, an apparatus according to any of claims 30, 31, and 33 includes, *inter alia*, “a primary drum; an auxiliary drum; devices for application of belt layers on the auxiliary drum to form a belt structure; at least one unit for applying a tread band onto the belt structure; and a transfer member; wherein the primary drum is arranged to support a carcass structure, . . . an actuating assembly . . . wherein said actuating assembly is arranged to cause

translation of the auxiliary drum away from a vertical plane containing the rotation axis of the primary drum towards said at least one delivery member, starting from a position at which the auxiliary drum interacts with the devices for applying the belt layers, and to move the auxiliary drum away from said delivery member to position it again in axial alignment relationship with respect to the primary drum” (emphasis added). Applicant respectfully submits that Hollmann does not teach or suggest at least these features of claims 19, 21-23, 28-31, and 33.

Hollmann discloses constructing a tread-strip package with belts on a tread strip drum. Col. 7, ll. 27-51. Hollmann discloses that a transfer device 106 moves the completed tread strip package to a position around a carcass disposed on a shaping drum 104. Col. 7, ll. 52-63. Hollmann suggests rotating the tread strip drum during construction of the tread-strip package. Col. 7, ll. 34-38. However, Hollmann does not teach or suggest any other movement of the tread strip drum. Thus, Hollmann fails to teach or suggest that “a step of moving the auxiliary drum away from a vertical plane containing the rotation axis of the primary drum towards a delivery member feeding the strip like element is carried out, starting from said coaxial-alignment relationship with the primary drum.”

For at least the foregoing reasons, Hollmann cannot anticipate claims 19, 21-23, 28-31, and 33. Accordingly, Applicant respectfully requests withdrawal of the rejection of these claims under 35 U.S.C. § 102(b) as being anticipated by Hollmann.

Regarding the rejection of claims 19, 21-23, 28-31, 33, and 35 under 35 U.S.C. § 102(b) as being anticipated by Okada, Applicant respectfully submits that Okada cannot anticipate these claims. A method according to any of claims 19, 21-23, 28, and

19 includes, *inter alia*, “disposing a carcass structure on a primary drum,” “disposing a belt structure on an auxiliary drum,” “picking up the belt structure from the auxiliary drum to transfer the belt structure to a position coaxially centered with respect to the carcass structure,” and “a step of moving the auxiliary drum away from a vertical plane containing the rotation axis of the primary drum towards a delivery member feeding the strip like element is carried out, starting from said coaxial-alignment relationship with the primary drum” (emphasis added). Similarly, an apparatus according to any of claims 30-33 includes, *inter alia*, “a primary drum; an auxiliary drum; devices for application of belt layers on the auxiliary drum to form a belt structure; at least one unit for applying a tread band onto the belt structure; and a transfer member; wherein the primary drum is arranged to support a carcass structure, . . . an actuating assembly . . . wherein said actuating assembly is arranged to cause translation of the auxiliary drum away from a vertical plane containing the rotation axis of the primary drum towards said at least one delivery member, starting from a position at which the auxiliary drum interacts with the devices for applying the belt layers, and to move the auxiliary drum away from said delivery member to position it again in axial alignment relationship with respect to the primary drum” (emphasis added). Applicant respectfully submits that Okada does not teach or suggest at least these features of claims 19, 21-23, 28-31, 33, and 35.

Okada discloses a tire manufacturing plant wherein rubber parts of the tire are formed by winding rubber strip delivered from an extruder. ¶¶37, 54, 55, 62, 65 and 66. In particular, in the forming processes of a belt/tread member 150, the forming drum 34 is first disposed to a position facing a belt servicer 100 by moving the forming drum 34

on rails 55. ¶¶65, 66. Additionally, a 1st belt 151 and a 2nd belt 152, for one tire, are supplied from the belt servicer 100 and wound around the forming drum 34. Id.

Subsequently, Okada's forming drum 34 is moved again on the rails 55, to reach a position facing the rubber parts servicers 110. ¶66. A rubber strip supplied from the rubber parts servicers 110 is wound around the forming drum 34 while the rotating speed of the forming drum 34 and the traversing speed of the rubber parts servicer 110 are controlled. Id. In this manner, a belt/tread member 150 is formed around the forming drum 34. Additionally, Okada's system forms a band member 140, which includes an inner liner 65 and a carcass 75, around a band drum 14.

Okada's system supports band drum 14 from driving section 13 suspended on rails 55 extending parallel to an axis of the band drum 14. See ¶39; and Figs. 1 and 2. Similarly, a driving section 33 suspends forming drum 34 from rails 55. Paragraph 41. As a consequence, a person of ordinary skill in the art would understand that Okada's forming drum 34 only moves along the geometric axis of the primary drum 14 and permanently holds an alignment relationship with respect to the primary drum 14, at least during the deposition of the belt layers and tread band.

In a second embodiment, Okada's system includes two band drums 14a, 14b supported by carriage 12 from rails 55. ¶¶73-75; Figs. 7 and 8. Here, driving section 13 can rotate around a horizontal axis perpendicular to rails 55 and the axes of band drums 14a, 14b. See ¶¶74; and Figs. 7 and 8. By rotating driving section 13 about this horizontal axis, Okada's system could move band drums 14a, 14b within a vertical plane through the axes of band drums 14a, 14b. Okada's second embodiment also includes two forming drums 34a, 34b suspended from driving section 33, with provisions

for rotating driving section 33 about a horizontal axis perpendicular to rails 55 and the axes of forming drums 34a, 34b. See ¶¶76, 77; and Figs. 7 and 8. By rotating driving section 33 around this horizontal axis, Okada's system would move forming drums 34a, 34b within a vertical plane through the axes of forming drums 34a, 34b and the axes of band drums 14a, 14b.

Thus, Okada does not teach or suggest "a step of moving the auxiliary drum away from a vertical plane containing the rotation axis of the primary drum towards a delivery member feeding the strip like element is carried out, starting from said coaxial-alignment relationship with the primary drum." In each embodiment, Okada's system Okada's system maintains the axes of forming drums in the same vertical plane as the axes of band drums.

For at least the foregoing reasons, Okada cannot anticipate claims 19, 21-23, 28-31, 33, and 35. Accordingly, Applicant respectfully requests withdrawal of the rejection of these claims under 35 U.S.C. § 102(b) as being anticipated by Okada.

Regarding the rejection of claims 24, 25, and 34 under 35 U.S.C. § 103(a) as being unpatentable over Hollmann or Okada in view of Caretta et al., Applicant respectfully submits that the Office Action cannot establish a *prima facie* case of obviousness. The Office Action must provide a clear explanation with rational underpinnings that demonstrates why a person of ordinary skill in the art would have found the claimed subject matter obvious. M.P.E.P. § 2142. A proper obviousness rejection must address every claim limitation. See M.P.E.P. § 2143.03. A method according to either of claims 24 and 25 includes, *inter alia*, "disposing a carcass structure on a primary drum" and "disposing a belt structure on an auxiliary drum," and

“a step of moving the auxiliary drum away from a vertical plane containing the rotation axis of the primary drum towards a delivery member feeding the strip like element is carried out, starting from said coaxial-alignment relationship with the primary drum” (emphasis added). Similarly, an apparatus according to claim 34 includes, *inter alia*, “a primary drum; an auxiliary drum; devices for application of belt layers on the auxiliary drum to form a belt structure; at least one unit for applying a tread band onto the belt structure; and a transfer member; wherein the primary drum is arranged to support a carcass structure, . . . an actuating assembly . . . wherein said actuating assembly is arranged to cause translation of the auxiliary drum away from a vertical plane containing the rotation axis of the primary drum towards said at least one delivery member, starting from a position at which the auxiliary drum interacts with the devices for applying the belt layers, and to move the auxiliary drum away from said delivery member to position it again in axial alignment relationship with respect to the primary drum” (emphasis added). As discussed above, Hollmann and Okada fail to teach or suggest these features.

Caretta fails to cure this deficiency. Caretta discloses an apparatus for manufacturing tire components directly on a rigid toroidal support. ¶¶37-39. Caretta discloses manufacturing a complete tire, including the carcass and belts, on the same toroidal support. ¶¶41, 70, and 71. Caretta does not teach or suggest “disposing a carcass structure on a primary drum” and “disposing a belt structure on an auxiliary drum,” and “a step of moving the auxiliary drum away from a vertical plane containing the rotation axis of the primary drum towards a delivery member feeding the strip like

element is carried out, starting from said coaxial-alignment relationship with the primary drum.”

Since Hollmann, Okada, and Caretta, whether alone or in combination, fail to teach or suggest all of the limitations of claims 19 and 30, Hollmann, Okada, and Caretta cannot teach or suggest all of the limitation of claims 24, 25, and 34, which depend from claims 19 and 30. For at least these reasons, Hollmann, Okada, and Caretta do not support a *prima facie* case of obviousness of claims 24, 25, and 34. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 24, 25, and 34 under 35 U.S.C. § 103(a) as being unpatentable over Hollmann or Okada in view of Caretta et al.

Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration of this application and the timely allowance of the pending claims.


The Office Action contains characterizations of the claims and the related art with which Applicant does not necessarily agree. Unless expressly noted otherwise, Applicant declines to subscribe to any statement or characterization in the Office Action.

Please grant any extensions of time required to enter this response and charge
any additional required fees to our deposit account no. 06-0916.

Respectfully submitted,

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